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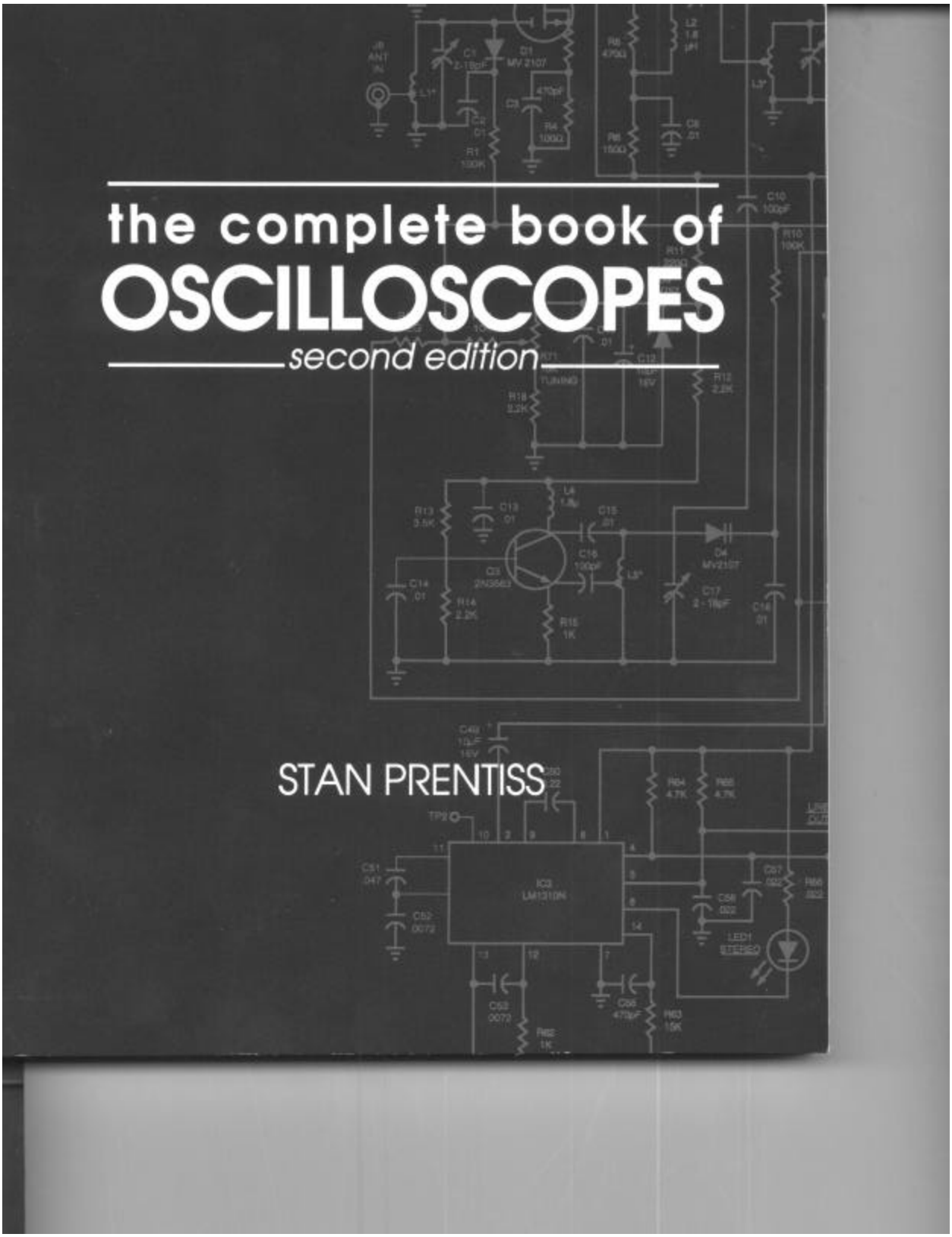

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Introduction

THIS SECOND EDITION OF THE COMPLETE BOOK OF OSCILLOSCOPES is almost a completely new book in every respect. Instruments, applications, techniques, descriptions, and troubleshooting information pertaining to this equipment and the hardware/software that they serve has been carefully researched and chronicled for maximum use in this expanding, diverse and highly instrumented world of electronics. If you possess the first edition of The Complete Book of Oscilloscopes, the combined volumes should cover a considerable number of both product offerings and utility over much of the past decade and serve as worthwhile reference material for even longer. From the first book, only one chapter has been reprinted in its entirety, and eight of the ten chapters in this one are completely new and fully state-of-the-art.

Of major interest is the extensive material that is devoted to digital storage oscilloscopes (DSOs); spectrum analyzers (from dc to 21 GHz); logic analyzers (with the new Fluke/Philips state and timing modes exhibited via a single probe on one screen), and others by Hewlett-Packard; a very special chapter on metal cable and fiberoptics time-domain reflectometry; particular information on storage and A/D/A converters; progressive and new applications of ordinary oscilloscopes; and especially an explanation of GPIB, RS-232, and Futurebus instrument connectors, digital printers; and a detailed description of what to expect in the laboratory of tomorrow.

Chapter 8 even explains how you can configure your own test equipment, complete with knobs and connections to troubleshoot or design special electronics wanted or existing that require extraordinary methods or attention. Software and hard

ware are explained in considerable detail, based on information furnished directly by a generous manufacturer. We have even included additional knowledge on signature analyzers in the expectation that extraordinary complexity in large-scale integrated circuits [LSI] will eventually force some manufacturers to adopt node logic readouts, rather than system or subsystem onscreen displays, which can and do leave much to be desired.

Overall, both text and illustrations should appropriately justify the title of this and its preceding sister volume, and furnish a wealth of useful information for all in the world of digital and analog electronics.

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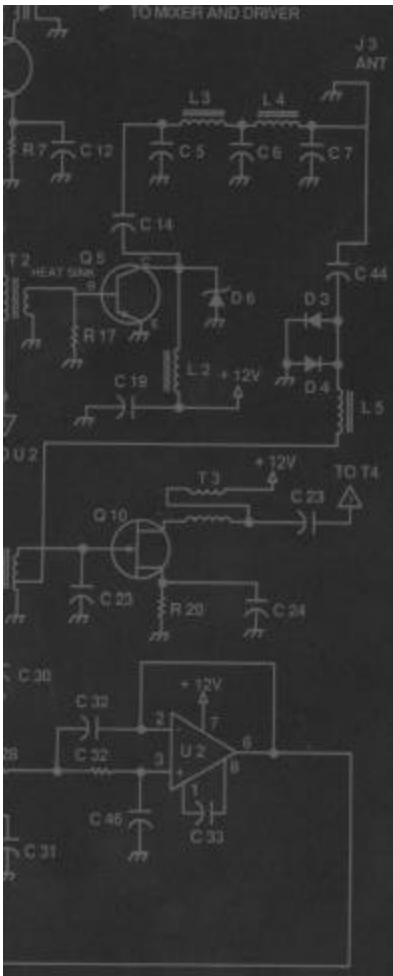

Praise for the first edition:

". . . a veritable course on oscilloscopes . . . can serve well to show readers how to use oscilloscopes as well as how to choose them for specific applications." —**Modern Electronics**

". . . makes good reading for users and those who would be users . . . Prentiss has brought together all the needed information for effective oscilloscope use." —**Cable Tech**

Now thoroughly revised and completely updated, this second edition of Stan Prentiss' popular, bestselling *Complete Book of Oscilloscopes* gives you an in-depth reference source and a practical applications guide in one easy-to-use volume.

Whether you're a hobbyist or a professional technician, you'll appreciate the easy-to-read style, the logical format, and the wealth of descriptive photographs and illustrations in ***The Complete Book of Oscilloscopes—2nd Edition.*** Prentiss examines in detail virtually every aspect of oscilloscopes and their use, including the latest equipment and advanced testing procedures:

- Digital storage oscilloscopes
- Spectrum analyzers (from dc to 21 GHz)
- Logic and signature analyzers
- Metal cable and fiberoptics time domain reflectometry
- Storage and A/D/A converters
- GPIB, RS-232, and Futurebus instrument connectors
- Digital printers

. . . and much more. If you work with scopes for any experimental or troubleshooting purpose, you'll find ***The Complete Book of Oscilloscopes—2nd Edition*** to be an essential addition to your electronics library.

Now retired from NASA's Goddard Space Flight Center, Stan Prentiss is an electrical engineer and internationally recognized expert in video communications. He has written hundreds of technical articles and more than 40 books, including TAB's *Electronic Signals and Systems, HDTV: High-Definition Television,* and *Troubleshooting and Repairing TVRO Systems.*